REMARKS

The Office Action dated March 5, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1 through 34 are currently pending in the subject application, including independent claims 1, 16-19, and 34. More specifically, Applicants herein added claims 20-34 to more particular point out and distinctly claim the subject matter of the present application. It is respectfully submitted that the claim additions add no new subject matter to the present application and serve only to place the present application in better condition for examination. Therefore, entry of the claim additions and reconsideration of the rejected pending claims are respectfully requested. It is believed that all grounds for rejection in the Office Action have been addressed and that the present application is currently in condition for allowance in view of the additions and the following explanations. Reconsideration and allowance of claims 1-34 are respectfully requested.

Rejections under 35 U.S.C. 103(a)

Claims 1-8, 11, and 14-19 were rejected under 35 U.S.C. §103(a) as being allegedly obvious in view of U.S. Patent No. 6,204,808 (Bloebaum-1). The Office Action took the position that Bloebaum-1 disclosed most of the features of these claims, but conceded that Bloebaum-1 failed to a location determination processor or a processor configured to provide an estimate of a delay. The Office Action asserted that Bloebaum-

1 disclosed functionally similar items, and therefore could allegedly be easily modified by one of ordinary skill in this field of technology to achieve the recited limitations. Applicants submit that Bloebaum-1 fails to disclose or suggest all of the features recited in any of pending claims. Accordingly, reconsideration and allowance of pending claims 1-8, 11, and 14-19 and new claims 20-34 are respectfully requested, as explained below.

Claim 1, from which claims 2-15 depend, is directed to a method that includes determining a likely location of mobile user equipment relative to a station. An estimate of a delay between transmission of a signal from the station and reception of the signal at the mobile user equipment is determined based on the determined likely location. Assistance data from the station is signaled to the mobile user equipment. This assistance data includes information about the timing of a positioning system. A more accurate location determination is determined at the user equipment based on signals from the entities of the positioning system, the assistance data and the estimated delay. The location is determined based on information signaled from entities of a positioning system and assistance data signaled from the station of the communication system.

Independent claim 16 relates to a positioning system that includes entities configured to signal information, and in this configuration, that mobile user equipment may receive and use the information from the entities when determining its location. The system further includes a station of a communication system configured to transmit information signals to the mobile user equipment. Continuing with the system, a location estimator is configured to provide an estimate of the likely location of the mobile user

equipment relative the station. The system further includes a processor configured to provide an estimate of the delay between transmission of an information signal from the station and reception of the information signal at the mobile user equipment based on the estimated location. A location determination processor in the system is configured to determine the location of the mobile user equipment based on signals from the entities of the position system, assistance data from the station, the assistance data including information about the timing of the positioning system and the estimate of the delay.

Independent claim 17 recites an apparatus that includes a first receiver configured to receive information signals from entities of a positioning system for use in location determinations by the mobile user equipment. A second receiver is configured to receive signals from a station of a communication system. Location determination circuitry is configured to determine the location of the mobile user equipment based on signals from the entities of the position system, assistance data signal received from the station, the assistance data including information about the timing of the positioning system, and a computed difference between the time of transmission of the assistance data signal from the station and the time of reception of the assistance data signal at the mobile user equipment, the difference being computed based on an estimated likely location of the mobile user equipment relative to the base station.

Independent 18 is directed to a system that includes a positioning system that includes entities configured to signal information in a configuration in which mobile user equipment can receive and use the information from the entities when determining its

location. The system further includes a station of a communication system configured to transmit information signals to the mobile user equipment. The system also has location estimation means for providing an estimate of the likely location of the mobile user equipment relative the station. A processor means provide an estimate of the delay between transmission of an information signal from the station and reception of the information signal at the mobile user equipment based on the estimated location. Also, location determination means in the system determine the location of the mobile user equipment based on signals from the entities of the position system, assistance data from the station, the assistance data including information about the timing of the positioning system and the estimate of the delay.

Independent claim 19 relates to an apparatus that includes a first receiver means for receiving information signals from entities of a positioning system for use in location determinations by the mobile user equipment. A second receiver means receives signals from a station of a communication system. Location determination means for determining the location of the mobile user equipment based on signals from the entities of the position system, assistance data signal received from the station, the assistance data including information about the timing of the positioning system, and a computed difference between the time of transmission of the assistance data signal from the station and the time of reception of the assistance data signal at the mobile user equipment. The difference is computed based on an estimated likely location of the mobile user equipment relative to the base station.

Independent claim 34 relates to a computer program embodied on a computer-readable medium configured to control a processor. Specifically, the process performs a determining of a likely location of mobile user equipment relative to a station. An estimate of a delay between transmission of a signal from the station and reception of the signal at the mobile user equipment is determined based on the determined likely location. Assistance data from the station is signaled to the mobile user equipment. In particular, this assistance data includes information about the timing of a positioning system. Then, a more accurate location determination is determined at the user equipment based on signals from the entities of the positioning system, the assistance data and the estimated delay. The location is determined based on information signaled from entities of a positioning system and assistance data signaled from the station of the communication system.

Applicants submit that each of the above claims recites features that are neither disclosed nor suggested in Bloebaum-1 or any of the other cited references.

Bloebaum-1 generally relates to determining a location of a mobile station. Specifically, the mobile station described in Bloebaum-1 includes a transceiver operating in a wireless network and a GPS receiver. The system described in Bloebaum-1 further includes a wireless network control system including GPS receivers for obtaining ephemeris data. The control system develops assistance information from the ephemeris data and transmits the assistance information to the mobile station via the wireless network. The assistance information represents range at a fixed location in the wireless

network in proximity to the mobile station at a select time, and derivatives of the range, relative to plural select satellites in the GPS. The mobile station utilizes received assistance information for searching the composite received signals from the plural select satellites in the GPS to measure a code phase for plural ones of the select satellites in the GPS and returning the measured code phases to the wireless network control system via the wireless network. The wireless network control system computes location of the mobile station in the wireless network utilizing a fixed location and the measured code phases.

The Office Action stated that Bloebaum-1 specifically discloses determining a likely location of a mobile user equipment relative to a station and determining an estimate of a delay between transmission of a signal from a station to the mobile. In particular, the Office Action refers to the recitation in the independent claims of a "round trip propagation delay" in Bloebaum-1 as being allegedly disclosed at column 10, lines 55 to 66. Applicants have carefully reviewed this and other disclosure in Bloebaum-1 and respectfully urge that there is no disclosure of round trip propagation delay in this reference. Accordingly, Applicants urge that this and other rejections in the Office Action are legally improper and the Office Action has failed to present a *prima facie* case to reject pending claims of the present application. Accordingly, withdrawal of this rejection and allowance of claims 1-8, 11, and 14-19 and new claims 20-34 are respectfully requested. Furthermore, Applicants note that since this Action is legally deficient, any future Action, if issued, must be "non-final."

Applicants further note that a round trip propagation delay may arguably be disclosed (not admitted) in column 10, lines 55 to 67 of U.S. Patent No. 6,188,351 (Bloebaum-2) that is identified in the Office Action. As such, it appears that Office Action is referring to Bloebaum-2 when alleging that the first and second recited steps of method claim 1 are known. Even assuming that the Office Action intended to refer to Bloebaum-2, but incorrectly referenced Bloebaum-1, Applicants note that this rejection would be legally and factually improper because Bloebaum-2 fails to disclose each and every limitation of any of pending claims.

Bloebaum-2 generally relates to improving signal acquisition in a Global Positioning System (GPS) receiver by providing information to focus the acquisition search in the receiver. In particular, Bloebaum-2 relates to a GPS receiver that is integrated with a transceiver that is capable of communicating with a cellular or PCS network via the air-interface particular to that network. Standard information provided by the network is used to assist the integrated GPS receiver and improve its sensitivity and latency.

Referring to claim 1, Applicants note that this claim recites "determining a likely location of a mobile user equipment relative to a station and determining an estimate of a delay between transmission of a signal from the station and reception of said signal at the mobile user equipment based on the determined likely location" (Emphasis Added). Applicants urge that neither Bloebaum-1 nor Bloebaum-2 contains disclosure relevant to these limitations. Referring to Bloebaum-2 in the paragraph bridging columns 10 and 11,

this reference discloses that the timing of the uplink transmission as seen by the BTS is effected by the round trip propagation delay between the BTS and the terminal and that in order to combat this delay, the BTS observes the timing of the uplink transmissions from the user and instructs the user to transmit earlier in time if the timing is late. According to Bloebaum-2, this technique is a implementation of a convention location technology known as timing advance (TA).

Applicants therefore urge that Bloebaum-2 does not disclose every limitations of claim 1, such as the above-noted determining steps. Specifically, Applicants note that the TA methodology disclosed in Bloebaum-2 is similar to the disclosure in U.S. Patent No. 6,452,541 (Zhao) cited in the prior Office Action of October 12, 2007, and as admitted in the prior Action, location methodology in Zhao failed to disclose each and every limitation of claim 1, such as the above-noted determining steps. Moreover, as described in the present application lines 15 to 21 of page 9, conventional location estimation technologies, such as the TA methodology, are technically flawed, and that certain recited embodiments of the present application provide an alternative solution to address the technical problem of compensating for timing delays when determining the location of a mobile user equipment.

For at least these reasons, Applicants urge that even if the Office Action intended to cite to Bloebaum-2, the resulting rejection of claim 1 under 35 U.S.C. §103(a) would be technically and legally incorrect because Bloebaum-2 does not disclose each and every recitation of claim 1. Applicants further submit that because claims 2-15 depend from

claim 1, these claims would be allowable over Bloebaum-2 for the same reasons as claim 1, as well as for the additional features recited in these dependent claims. Similarly, independent claims 16-19, although different in scope and rejected on separate grounds from claim 1 and in view of separate sections of the cited references, contain similar recitations and would be allowable over Bloebaum-2 on similar grounds. In any event, if the application is not in condition for allowance, a new, non-final action is needed which clearly and properly sets forth the basis for rejection.

Claims 9-10 were rejected under 35 U.S.C. §103(a) as being allegedly obvious in view of the combination of Bloebaum-1 and Zhao. The Office Action took the position that Bloebaum-1 disclosed or suggested the limitations of independent claim 1, and Zhao disclosed the additional limitations of dependent claims 9-10. Applicants submit that the combination of Bloebaum-1 and Zhao fails to disclose or suggest all of the features recited in any of pending claims. Accordingly, reconsideration and allowance of claims 9-10 are respectfully requested, as explained below.

Applicant note that this rejection is legally improper because Bloebaum-1 clearly fails to disclose each and every limitation of independent claim 1. Therefore, this rejection is legally improper *per se* and must be withdrawn. Accordingly, reconsideration and allowance of claims 9-10 are respectfully requested on this legal basis. Applicants further note that since this Action is legally deficient, any future rejection of claims 9-10, if issued, must be "non-final."

Applicants further note that even if the Office Action had referred cited to Bloebaum-2, this rejection would also be legally and technically and legally incorrect for the at least the reasons presented above.

Applicants further note that Zhao fails to cure these deficiencies in Bloebaum-2. Specifically, as conceded in the prior Actions, Zhao fails to disclose or suggest each and every limitation of the claims. For example, referring to claim 1, Zhao does not teach or suggest the limitations of:

> determining a likely location of mobile user equipment relative to a station;
>
> determining an estimate of a delay between transmission of a signal from the station and reception of said signal at the mobile user equipment based on the determined likely location;
>
> ...; and
>
> calculating a more accurate location determination at the user equipment based on signals from the entities of the positioning system, the assistance data and said estimated delay,

As discussed in Applicants' prior submission of December 31, 2007, Zhao is directed to a network assisted satellite positioning system based location scheme (see col. 1, lines 62 to 65 of Zhao). Zhao also describes transmitting assistance messages via a network to mobile receivers and discloses transmitting the assistance messages with a GPS time. Indication of a delay occurring between the time the GPS time is applied to the assistance message and the time the assistance message is received at the mobile receiver is disclosed and it is disclosed that this delay will be variable according to the location of the mobile receiver. According to Zhao, a communication network periodically

determines a roundtrip delay between a base station and a mobile station and this can be used to determine the delay incurred by the assistance messages, and used to compensate for the time required to propagate the assistance message to the mobile receiver for example, by adding the delay to the GPS time stamped onto the assistance message (see, for example, column 2, lines 10 to 58 and column 4, lines 19 to 24 of Zhao).

For at least these reasons, Applicants urge that even if the Office Action intended to cite to Bloebaum-2, the resulting rejection of claim 9-10 under 35 U.S.C. §103(a) would be technically and legally incorrect because the combination of Bloebaum-2 and Zhao does not disclose each and every recitation of claim 1. Because claims 9-10 depend from claim 1, these claims would be allowable over Bloebaum-2 and Zhao for the same reasons as claim 1, as well as for the additional features recited in these dependent claims.

Claims 12-13 were rejected under 35 U.S.C. §103(a) as being allegedly obvious in view of the combination of Bloebaum and U.S. Patent No. 6,405,047 (Moon). The Office Action took the position that Bloebaum-1 disclosed or suggested the limitations of independent claim 1, and Moon disclosed the additional limitations of dependent claims 12-13. Applicants submit that the combination of Bloebaum-1 and Moon fails to disclose or suggest all of the features recited in any of pending claims. Accordingly, reconsideration and allowance of claims 12-13 are respectfully requested, as explained below.

Again, Applicant note that this rejection is legally improper because Bloebaum-1 clearly fails to disclose each and every limitation of independent claim 1. Therefore, this rejection is legally improper *per se* and must be withdrawn. Accordingly, reconsideration and allowance of claims 12-13 are respectfully requested on this legal basis. Applicants again note that since this Action is legally deficient, any future rejection of claims 12-13, if issued, must be "non-final."

Applicants further note that even if the Office Action had cited to Bloebaum-2, this rejection would also be legally and technically and legally incorrect for the at least the reasons presented above.

Applicants further note that Moon fails to cure these deficiencies in Bloebaum-2. Specifically, as conceded in the prior Actions, Moon fails to disclose or suggest each and every limitation of the claims. For example, referring to claim 1, Moon does not teach or suggest the limitations of:

> determining a likely location of mobile user equipment relative to a station;
>
> ...; and
>
> calculating a more accurate location determination at the user equipment based on signals from the entities of the positioning system, the assistance data and said estimated delay,

As discussed in Applicants' prior submission of December 31, 2007, In particular, the Office Action relied upon Moon for disclosing the step of determining an estimate of transmission delay and refers specifically to Moon at column 5, lines 18 to 28. While Moon arguably discusses a delay between a mobile user equipment and a station (not

admitted), Applicants argued in the prior Response of December 31, 2008 (and it is unrefuted in the present Action) that there is absolutely no disclosure in Moon of estimating the delay based on the determined likely location of the mobile user equipment as recited in claim 1.

For at least these reasons, Applicants urge that even if the Office Action intended to cite to Bloebaum-2, the resulting rejection of claim 12-13 under 35 U.S.C. §103(a) would be technically and legally incorrect because the combination of Bloebaum-2 and Moon does not disclose each and every recitation of claim 1. Because claims 12-13 depend from claim 1, these claims would be allowable over Bloebaum-2 and Moon for the same reasons as claim 1, as well as for the additional features recited in these dependent claims.

Based at least on the above, Applicants submit that the cited references fail to disclose or suggest all of the features recited in claims 1-34. Accordingly, withdrawal of the rejections under 35 U.S.C. 103(a) and allowance of new claims 20-34 are respectfully requested.

As discussed above, each of pending claims 1-34 recites subject matter which is neither disclosed nor suggested in the cited reference. Applicants submit that the recited subject matter is more that sufficient to render the invention non-obvious to a person of ordinary skill in the art. It is respectfully requested that independent claims 1, 16-19, and 34 and the related dependent claims be allowed in view of the above arguments, comments, and remarks, and that the present application be allowed to pass to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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Enclosures: Additional Claim Fee Transmittal
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